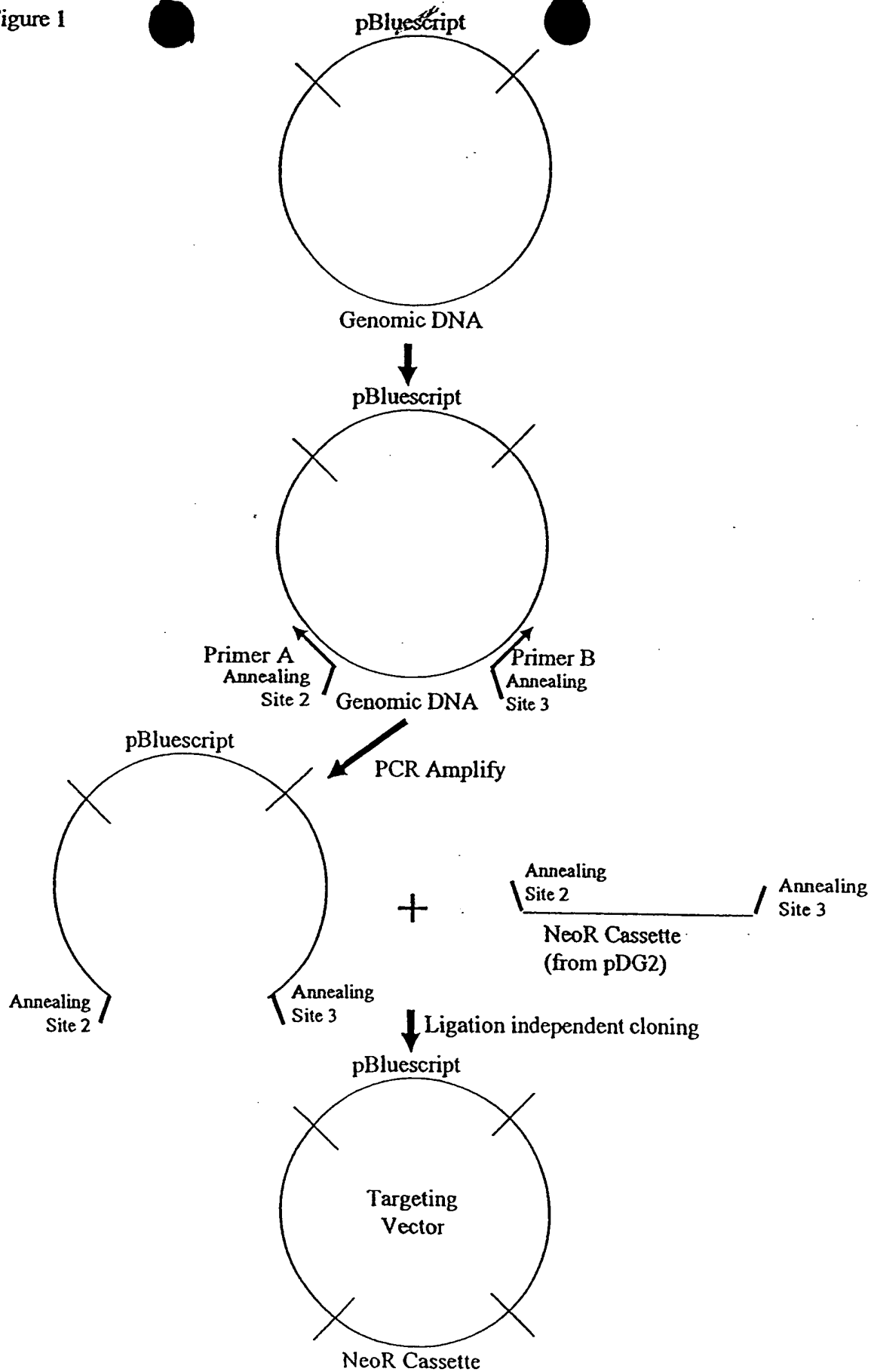


Figure 1



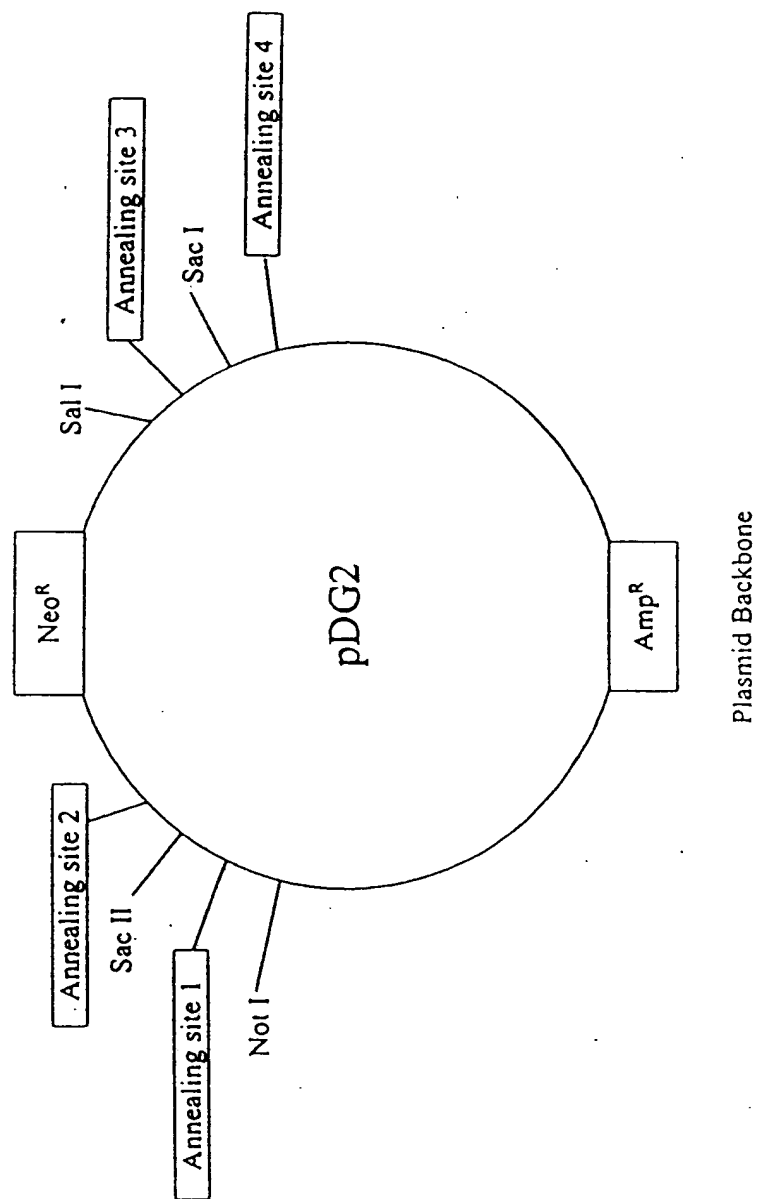


FIGURE 2A

FIGURE 2B

pDG2:

GTGTAAGTACGTCAGTGGGCACTTTTCGGGGAAGTGTGCGCGGAACCCCTATTGTTTATTTTCTAAATACATTCAAATA
TGTATCCGCTCATGAGACAATAACCCGTGATAAATGCTTCAATAATATTGAAAAGGAAGAGTATGAGTATTCACACATTTT
CGTGTGCGCCCTATTCCCTTTTTTGGCGCATTTTGCCTTCTGTTTTGCTCACCAGAAACCGCTGGTGAAAGTAAAGA
TCGTAAGATCAGTTGGGTGACGAGTGGGTACATCGAATGGATCTCAACGCGGTAAAGATCTTGAGAGTTTTGCGCC
CCGAAGAACGTTTCTCAATGATGAGCACTTTTAAAGTTCTGCTATGTCGGCGGTATTATCCCGTGTGACGCGCGCAA
GAGCAACTCGGTGCGCGCATACACTATTCTCAGAATGACTTGGTTGAGTACTACCAGTCAAGAAAAGCATCTTACGGA
TGGCATGACAGTAAGAGAATTATGCACTGCTGCCATAACCATGAGTGATAAAGTGGCGGCAACTTACTTCTGACAACGA
TCGGAGGACCGAAGGAGCTAACCGCTTTTTTGCAAAATGCGGGGATCATGTAAGTCCGCTTGATCGTTGGGAACCGGAG
CTGAATGAAGCCATACCAAACGACGAGCGTGACACCAGATGCTGTAGCAATGGCAACAACGTTGCGCAAACTATTAACT
TGGCGCACTTACTTACTGCTTCCCGGCAATTAATAGCTGGATGGAGCGGATAAAGTTGTCAGGACCACTTCTGCTG
GCTCGGCCCTTCCGGCTGGCTGGTTTTATTGCTAGATAAATCTGAGCGCGGTGAGCGGGTCTGCGGTTACTTTCAGCA
CTGGGGCCAGATGGTAAGCCCTCCCGTATCGTAGTTATCTACACGACGGGGAGTCAGGCAACTATGGATGAACGAAATAG
ACAGATCGCTGAGATAGGTGCCTCACTGATTAAAGCATTGGTAAGTGTGACAGCAAGTTTACTCATATATACTTTAGATTG
ATTTACCCCGGTTGATAATCAGAAAAGCCCCAAAAACAGGAAGATTGTATAAGCAAAATTTAAATTTGTAACGTTAATA
TTTTTTGTTAAATTCGCGTTAAATTTTTGTTAAATCAGCTCATTTTTTTAAACAAAGCTGGAATCGGCAAAATCCCTTAT
AAATCAAAAGAAATAGCCGAGATAGGTTGAGTGTGTTCCAGTTTGGAAACAGAGTCCACTATTAAGAAACGTGGACTC
CAACGTCAAAGGGCGAAAAACCGTCTATCAGGGCGATGGCCCACTACGTGAACCATCACCCAAATCAAGTTTTTGGGGT
CGAGGTGCGGTAAAGCACTAAATCGGAACCTAAAGGGAGCCCCGATTAGAGCTTGACGGGGAAGCGAAGCTGGCGA
GAAAGGAAGGGAAGAAAGCGAAAGGAGCGGGCGCTAGGGCGCTGGCAAGTGTAGCGGTACAGCTGCGCGTAACCAACCA
CCCGCGCGCTTAATGCGCGCTACAGGGCGCGTAAGGAAGCTAGGTGAAGATCCTTTTTGATAATCTCATGACAAAA
TCCCTTAACTGATGTTTTGTTTCCACTGAGCGTCAAGCCCGTAGAAAAGATCAAAAGGATCTTCTTGAGACTCTTTTTT
CTGCGCTAATCTGCTGCTTGCAAAACAAAAAACCAACCGCTACCAGCGGTGGTTTTGTTTGGCGAGAGCTACCAAC
TCTTTTTCGAAGGTAATCGGCTTCAAGCAGAGCGCAGATACCAAATACTGTTCTTCTAGTGTAGCGGTAGTTAGGCCACC
ACTTCAAGAATCTGTAGCACGCGCTACATACCTCGCTCTGCTAATCTGTTTACAGTGGCTGCTGCGCAGTGGCGATAG
TCGTGCTTACCGGGTTGGACTCAAGACGATAGTTACCGGATAAGGCGCAGCGGTGGGCTGAACGGGGGCTTCTGTCAG
ACAGCCAGCTTGGAGCGAACGACCTACACCGAACTGAGATACCTACAGCGTGAGCTATGAGAAAGCGGCGACGCTTCCCG
AAGGAGAAAGCGGAGCAGGTATCCGTTAAGCGCGAGGGTCGGAACAGGAGAGCGCAGAGGAGCTTCCAGGGGAAAC
GCCTGGTATCTTTATAGTCTGTGCGGTTTTGCCACCTCTGACTTGAGCGTCGATTTTTGTGATGCTGTCAGGGGGGCG
GAGCCTATGGAAGAAACGCCAGCAACGCGGCTTTTTAGCGTTCTGGCCCTTTGCTGGCCTTTTGTCTCATGTAAATGTG
AGTTAGCTCACTCATTAGGCAACCCAGGCTTTACACTTTATGCTTCCGGCTCGTATGTTGTGGAATTTGTAGCGGATA
ACAATTTACACAGGAAGAACAGTATGACCATGATTACGCCAAGTACGTAATACGACTCACTAGGCGGCGGTTTAAAC
AATGTGCTCTCTTTGGCTTGCTTCCGCGGGCCAGCGCAGACAGAAACAGTGTACGCTCAAGCTTCCGGGAGCGGTGCT
AGCGGCGCGCGAATTCCTGCAAGGATTCAGAGGCCCCCTGAGGTCATTTCTACCGGGTAGGGGAGGCGCTTTTCCCAAGG
CAGTCTGGAGCATGCGCTTTAGCAGCCCCGCTGGCACTTGGCGCTACACAAGTGGCCTCTGGCTCGCACACATTCCACA
TCCACCGGTAGCGCAACCGGCTCGGTCTTTGGTGGCCCCCTTGGCGCCACCTTCTACTCTCTCCCTAGTCAGGAAGTTC
CCCCCGCCCCCGCAGCTCGCGCTGTCAGGACGTGACAAATGGAAGTAGCAGCTCTCACTAGTCTGTCAGATGGACAG
CACCGCTGAGCAATGGAAGCGGTAGGCTTTGGGCGAGCGGCAATAGCAGCTTTGCTCTTCTGCTTTCTGGGCTCAGA
GGCTGGGAAGGGGTGGGTCTCGGGGGCGGGCTCAGGGGCGGGCTCAGGGGCGGGCGGGCGCAAGGTCTTCCGAGGCC
GGCATTCTCGCAGCTTCAAAGCGCAGCTCTGCGCGCTGTTCTCTCTCTCTCATCTCGGGCTTTTGCACCTGCGAGC
CAATATGGGATCGGCCATTGAACAAGATGGAATGCAAGCAGGTTCTCGGCGGCTTGGGTGGAAGAGGCTATTCCGCTATG
ACTGGGCACAACAGACAATCGGCTGCTCTGATGCCCGGCTGTTCCGGCTGTGACGCGAGGGGCGCCCGGTTCTTTTGTG
AAGACCGACCTGTCCGCTGCGGTGAACTGAACTGAGGACGAGGACGAGGCTGCTGCTGCTGCGGACGAGGCGGCTTCT
TGCGCAGCTGTGCTCGACGTTGTCACTGAAGCGGAAGGAGTGGCTGCTATTGGGCGAAGTGCAGGGGCGAGATCTCC
TGTCATCTACCTTGCTCTGCGGAGAAAGTATCCATCATGGCTGATGCAATGCGGCGGCTGCATACGCTTGATCCGGCT
ACCTGCCATTTCGACCACCAAGCGAAACATCGCATCGAGCGAGCAGTACTCGGATGGAAGCGGCTCTGTCGATCAGGA
TGATCTGGACGAAGAGCATCAGGGGCTCGCGCAGCGCAACTGTTCCGAGGCTCAAGGCGCGCATGCCGACGCGCATG
ATCTCGTGTGACCACTGGCGATGCTGCTGCGGAATATCATGGTGGAAAAAGGGCGCTTTTCTGGAATCTCGACTCATG
GGCGGCTGGGTGCGGCGGACCGCTATCAGGACATAGCTTGGCTACCGGTGATATGCTGAAGAGCTTGGCGCGGAATG
GCTGACGCGCTTCTGCTGCTTCTTACGGTATCGCGCTCCGATTGCGAGCGATCGCTTCTATCGCTTCTTGACGAGT
TCTTCTGAGGGGATCGATCCGCTCTGTAAGTCTGCAGAAATTGATGATCTATTAACAATAAAGATGTCCTAAATGGA
AAGTTTTTCTGTCTACTTTGTTAAGAGGGTGAGAACAGAGTACCTACATTTGAATGGAAGGATTGGAGCTACGGGG
GTGGGGGTGGGGTGGGATTAGATAAATGCTGCTCTTTACTGAAGGCTCTTTACTATTGCTTTATGATAATGTTTCATAG
TTGATATCATAAATTTAAACAAGCAAAACCAAATTAAGGCGCAGCTCATTCTCCCACTCATGATCATAGATCTATAGA
TCTGCTGTGGGATCATGGTTTTCTCTTCTGATTTCCACTTTTGGTGTCTAAGTACTGTGGTTTTCAAATGTGTGAGTTCA
TAGCCTGAAGAACGAGATCAGCAGCCTCTGTTCCACATACACTTCACTTCTCAGTATTGTTTTGCCAAGTTCTAATCCAT
CAGAAGCTGACTCTAGATCTGGATCCGGCAGCTAGGCCGTGACCTCGAGTGATCAGGTACCAAGGCTCTCGCTCTGTG
TCCGTTGAGCTCGACGACACAGGACACGCAAAATTAATTAAGGCCGCGCCGTACCCCTAGTCAAGGCCCTTAAGTGAGTGT
TATTACGGAAGTGGCGCTGTTTTACAACGTCGTGACTGGAAAAACCCCTGGCGTTACCCAACTTAATCGCCTTGACGACA
TCCCCCTTTCCGCAAGCTGGCGTAAGCGAAGAGGCCCGACCGATGCGCCTTCCCAACAGTTGCGCAGCCTGAATGGCG
AATGGCGCTTCCGTTGGTAATAAAGCCCCGTTCCGCGGGCTTTTTTTT

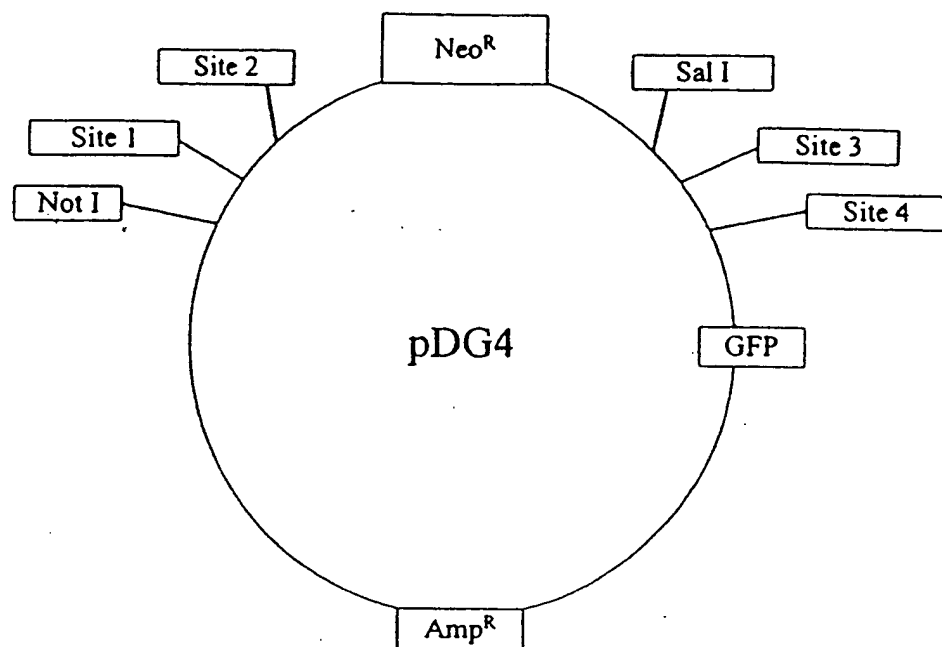


FIGURE 3A

FIGURE 3B

pDG4:

GTTTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATATATGGAGTTCGCGTTACATAACTTACGGTAAATGG
 CCGCCTGGCTGACCGCCCAACGACCCCGCCATTGACGTCAATAATGACGTATGTTCCCATAGTAACGCCAATAGGGA
 CTTTCCAATGACGTCAATGGGTGGAGTATTTACGGTAACTGCCACTTGGCAGTACATCAAGTGTATCATATGCCAAGT
 ACGCCCCCTATTGACGTCAATGACGGAATGGCCGCTGGCATTAAAGCCAGTACATGACCTTATGGGACTTTCCTAC
 TTGGCAGTACATCTACGTATTAGTTCATCGCTATTACCATGGTGATGCGGTTTTGGCAGTACATCAATGGGCGTGATAGC
 GGTTTGACTCACGGGGATTTCGAAGTCTCCACCCATTGACGTCAATGGGAGTTTGTTTTGGCACCAAAATCAACGGGAC
 TTTCCAAAATGTCGTAACTCCGCCCCATTGACGCAATGGGCGTAGGCGTGTACGGTGGGAGGTCTATATAAGCAG
 AGCTGGTTTAGTGAAACCGTCAGATCCGCTAGCGCTACCGGTCGCCACCATGGTGAGCAAGGGCGAGGAGCTGTTACCGG
 GGTGGTGGCCATCTGGTCGAGCTGGACGGGACGTAAACGGCCCAAGTTTACGGTGTCCGGCGAGGGCGAGGGCGATG
 CCACCTACGGCAAGCTGACCTGAAGTTTCTGTCACCACCGGCAAGCTGCGCGTGGCCCTGGCCACCCTCGTGACCACC
 CTGACCTACGGCGTGCACTGCTTACGCGCTACCCCGACCATGAAGCAGCAGACTTCTTCAAGTCCGCCATGCCCGA
 AGGCTACGTCCAGGAGCGACCATCTTCTTCAAGGACGACGGCACTACAAGACCGCGCGGAGGTGAAGTTGAGGGGG
 ACACCTGGTGAAACCGCATCGAGCTGAAGGGCATCGACTTCAAGGAGGACGGCAACATCTGGGGCACAAGCTGGAGTAC
 AACTACAACAGCCACAACGTCTATATCATGGCCGACAGAGCAAGAACGGCATCAAGGTGAACCTCAAGATCCGCCACAA
 CATCGAGGACGGCAGCGTGCAGCTCGCGGACCACTACAGCAGAACACCCCATCGGCGACGGCCCGTGTCTGCCCG
 ACAACCACTACCTGAGGACCCAGTCCGCCCTGAGCAAGACCCCAACGAGAAGCGGATCAGATGGTCTGCTGGAGTTT
 GTGACCGCGCGGGATCACTCTCGGCATGGACGAGCTGTACAAGTCCGGACTCAGATCCACCGGATCTAGATAACTGAT
 CATAATCAGCCATACCACATTTGTAGAGGTTTACTTGTCTTAAAAAACCTCCACACCTCCCGCTGAACCTGAAACATA
 AAATGAATGCAATTGTTGTTTAACTGTTTATTGACGTTTAAATGGTTACAAATAAAGCAATAGCATACAAATTTT
 ACAAATAAAGCATTTTTTCACTGCATTCTAGTTGGTTGTTGCCAACTCATCAATGTATCTTAAACGCAACTACGTCA
 GGTGGCACTTTTCGGGGAAATGTGCGCGGAACCCCTATTGTTTATTTTCTAAATACATTCAAATATGTATCCGCTCAT
 GAGACAATAACCTGATAAATGCTTCAATAATATTGAAAAAGGAAGAGTATGAGTATTCAACATTTCCGTGTGCGCCTTA
 TTCCTTTTTTGGCGCATTTTGCCCTTCTGTTTTGCTCACCAGAAACGCTGGTGAAGTAAAGATGCTGAAGATCAG
 TTGGGTGACAGAGTGGGTACATCGAACTGGATCTCAACAGCGGTAAAGTCTTGAGAGTTTTGCGCCCGAAGAACGTTT
 TCCAATGATGAGCACTTTTAAAGTTCTGCTATGTGGCGCGTATTATCCCGTGTGACGCGGGCAAGAGCAACTCGGT
 GCGCATACACTATTCTCAGAATGACTTGGTTGAGTACTCACCAGTACAGAAAAGCATCTTACGGATGGCATGACAGTA
 AGAGAATTATGCAGTGTGCCATAACCATGAGTGATAACACTGCGGCCAACTTACTTCTGACAACGATCGGAGGACCGAA
 GGAGCTAACCGCTTTTTTGCAACATGGGGGATCATGTAATCGCTTGATCGTTGGGAACCGGAGCTGAATGAAGCCA
 TACCAACGACGAGCGTGACACACCATGCTGTAGCAATGGCAACAACTGCGCAAACTATTAAGTGGCGAACTACTT
 ACTCTAGCTTCCCGGCAACAATTAAGACTGGATGGAGCGGATAAAGTTGCGAGGACCACTTCTGCGCTCGGCCCTTCC
 GGCTGGCTGTTTATTGCTGATAAATCTGGAGCCGCTGAGCGTGGTCTCGCGGTATCATTCGAGCACTGGGCCAGATG
 GTAAGCCCTCCCGTATCGTAGTTATCTACAGCAGGGGAGTCAAGCAACTATGGATGAACGAAATAGACAGATCGCTGAG
 ATAGGTGCCTCACTGATTAAGCATTGGTAACTGTGACACCAAGTTTACTCATATATACTTTAGATTGATTTACCCCGGTT
 GATAATCAGAAAAGCCCCAAACAGGAAGATTGTATAAGCAAAATTTAAATTGTAACGTTAATAATTGTTAAATTT
 CGCGTTAAATTTTTGTTAAATCAGCTCATTTTTTAACCAATAGGCGGAAATCGGCAAAATCCCTTATAAATCAAAAGAA
 AGCCCGAGATAGGGTTGAGTGTGTTCCAGCTTGGAAACAGAGTCCACTATTAAGAACGTTGAGTCCCAAGCTCAAGGG
 CGAAAACCGTCTATCAGGGCGATGGCCCACTACGTGAACCATCACCCAAATCAAGTTTTTGGGGTGGAGGTGCGGTAA
 AGCACTAAATCGGAACCTTAAAGGGAGCCCCGATTTAGAGCTTGACGGGAAAGCGAACGTTGGCGAGAAAGGAAGGGAA
 GAAAGCGAAAGGAGCGGGCGCTAGGGCGCTGGCAAGTGTAGCGGTACGCTGCGCGTAAACCCACACCCCGCGCTTA
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 GTTTTCGTTCCACTGAGCGTCAGACCCCGTAGAAAAGATCAAAGGATCTTCTTGAGATCTTTTCTGCGCGTAACTCT
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 GTAAGTGGCTTACGACAGCGCAGATACCAATACTGTTCTTCTAGTGTAGCGTAGTTAGGCCACCACTTCAAGAACTC
 TGTAGCACCGCTACATACCTCGCTGCTAATCCTGTTACCAGTGGCTGCTGCCAGTGGCGATAAGTCGTGTCTTACCG
 GGTGGACTCAAGACGATAGTTACCGGATAAGGCGCAGCGGTGCGGCTGAACGGGGGGTTCGTGCACACAGCCAGCTTG
 GAGCGAACGACCTACACCGAATGAGATACCTACAGCGTGAGCTATGAGAAAGCGCCACGCTTCCCGAAGGGAGAAAGGC
 GGACAGGTATCCGGTAAGCGGCGGGTCGGAACAGGAGAGCGCAGAGGGAGCTTCCAGGGGAAACGCTCGGTATCTTT
 ATAGTCTGTGCGGTTTCCGACCTCTGACTTGAGCGTCAATTTTGTGATGCTCGTCAAGGGGGCGGAGCCTATGAAAA
 AACGCCAGCAACGCGGCTTTTACGGTCTCTGCGCTTTGCTGCGCTTTGCTCAGATGTAATGTGAGTTAGCTCACTC
 ATTAGGCACCCAGGCTTTACACTTTATGCTTCCGCTCGTATGTTGTGTTGGAATTGTGAGCGGATAACAATTTACACA
 GGAACAGCTATGACCATGATTACGCCAAGCTACGTAATACGACTCACTAGGCGGCGCGTTTAAACAATGTGCTCCTCT
 TTGGCTTGCTTCCGCGGGCAAAGCCAGACAAGAACAGTTGACGTCAAGCTTCCCGGACCGGTGCTAGCGGCGCGGA
 ATTCCTGCAGGATTCGAGGGCCCCGAGGTCAATTTACCGGTAGGGGAGGCGCTTTCCCAAGGAGCTCTGGAGCAT
 GCGCTTTAGCAGCCCGCTGGCACTTGGCGCTACACAAGTGGCTCTGCGCTCGCACACATTCCACATCCACCGGTAGCG
 CCAACCGGCTCGTTCTTTGGTGGCCCCCTTCCGCGCACCTTCTACTCTCCCTAGTCAGGAAGTCCCCCGCGCCCGC
 AGCTCGCGTGTGACGAGCGTGACAAATGGAAGTAGCAGTCTCACTAGTCTCGTGAGATGGACAGCAGCGCTGAGCAA
 TGGAAAGCGGTAGGCTTTGGGGCAGCGGCCAATAGCAGCTTTGCTCCTTCCGTTTCTGGGCTCAGAGGCTGGGAAGGG
 TGGGTCCGGGGCGGGCTCAGGGGCGGGCTCAGGGGCGGGCGGCGGAAGTCTCCGAGGCGCGGCAATCTCGCAC
 GCTTCAAAAGCGCAGCTCTGCGCGCTGTTCTCTCTCTCTCCTCATCTCCGGGCTTTTCGACTCGAGCCTTCTCGCAC
 GCCATTGAACAAGATGGATTGACGAGGTTCTCGGCGCTTGGGTGGAGAGGCTATTGGCTATGACTGGGCACAACA
 GACAAATCGGCTGCTCTGATGCGCGGCTTTCGGCTGTGAGCGCAGGGGCGCCGCTTCTTTGTCAAGACCGACCTGT
 CCGGTGCCCTGAATGAACTGCAGGACGAGGCGAGCGGCTATCGTGGTGGCCACGACGGGCGTCTCTGCGCAGCTGTG
 CTCGAGCTTGTCACTGAAGCGGAAGGGACTGGCTGCTATTGGCGAAGTGCAGGGGCGAGATCTCTGTCTCATCTACCT

TGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATGCCGCCGCTGCATACGCTTGATCCGGCTACCTGCCCATTCG
ACCACCAAGCGAAACATCGCATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
GAGCATCAGGGGCTCGCGCCAGCCGAACTGTTGCCAGGCTCAAGGCGCGCATGCCGACGGCGATGATCTCGTCGTGAC
CCATGGCGATGCCTGCTTGCCGAATATCATGGTGAAAAATGGCCGCTTTTCTGGATTTCATCGACTGTGGCCGGCTGGGTG
TGGCGGACCGCTATCAGGACATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
CTCGTGCTTTACGGTATCGCCGCTCCCGATTCCGAGCGCATCGCCTTCTATCGCCTTCTTGACGAGTTCTTCTGAGGGGA
TCGATCCGTCCTGTAAGTCTGCAGAAATTGATGATCTATTAACAATAAAGATGCCACTAAAAATGGAAGTTTTCTCTGT
CATACTTTGTTAAGAAGGGTGAGAACAGAGTACCTACATTTGAATGGAAGGATTGGAGCTACGGGGTGGGGGTGGGGT
GGGATTAGATAAATGCCTGCTCTTTACTGAAGGCTCTTTACTATTGCTTTATGATAATGTTTCATAGTTGGATATCATAA
TTTAAACAAGCAAAACCAAATTAAGGGCCAGCTATTCTCCCACTCATGATCTATAGATCTATAGATCTCTCGTGGGAT
CATTTGTTTTCTCTTGATTCCCACTTTGTGGTTCTAAGTACTGTGGTTTCCAAATGTTGCAGTTTCATAGCCTGAAGAAC
GAGATCAGCAGCCTCTGTTCCACATACACTTCATTCTCAGTATTGTTTTGCCAAGTTCTAATTCCATCAGAAGCTGACTC
TAGATCTGGATCCGGCCAGCTAGGCCGTCGACCTCGAGTGATCAGGTACCAAGGTCCTCGCTCTGTGTCCGTTGAGCTCG
ACGACACAGGACACGCAAAATTAATTAAGGCCGGCCCGTACCCTCTAGTCAAGGCCTTAAGTGAGTCGTATTACGGA CTGG
CCGTCGTTTTACAACGTCGTGACTGGGAAAACCTGGCGTTACCAACTTAATCGCCTTGACAGCACATCCCCCTTTCCGC
AGCTGGCGTAATAGCGAAGAGGCCCGCACCGATCGCCCTTCCCAACAGTTGCGCAGCCTGAATGGCGAATGGCGCTTCGC
TTGGTAATAAAGCCCGCTTCGGCGGGCTTTTTTTT

FIGURE 3B (Continued)

4

Annealing site	Sequence	Sequence after digestion
1	5' tgtgctcctctcttggcttgcttccaa... 3' 3' acacgaggagaaaccgaacgaagggt... 5'	5' tgtgctcctctcttggcttgcttccaa... 3' 3' tt... 5'
2	5' ctgggtctctgtctggcttgcccaa... 3' 3' gaccaagaacagacgaaccgggtt... 5'	5' ctgggtctctgtctggcttgcccaa... 3' 3' tt... 5'
3	5' ggtcctcgcctctgtgtccggttgaa... 3' 3' ccaggagcgagacacagggaactt... 5'	5' ggtcctcgcctctgtgtccggttgaa... 3' 3' tt... 5'
4	5' ttctgcgtgtcctctgtctcgtcgaa... 3' 3' aaacgcacaggacacagcagcgtt... 5'	5' ttctgcgtgtcctctgtctcgtcgaa... 3' 3' tt... 5'

FIGURE 4

FIGURE 6

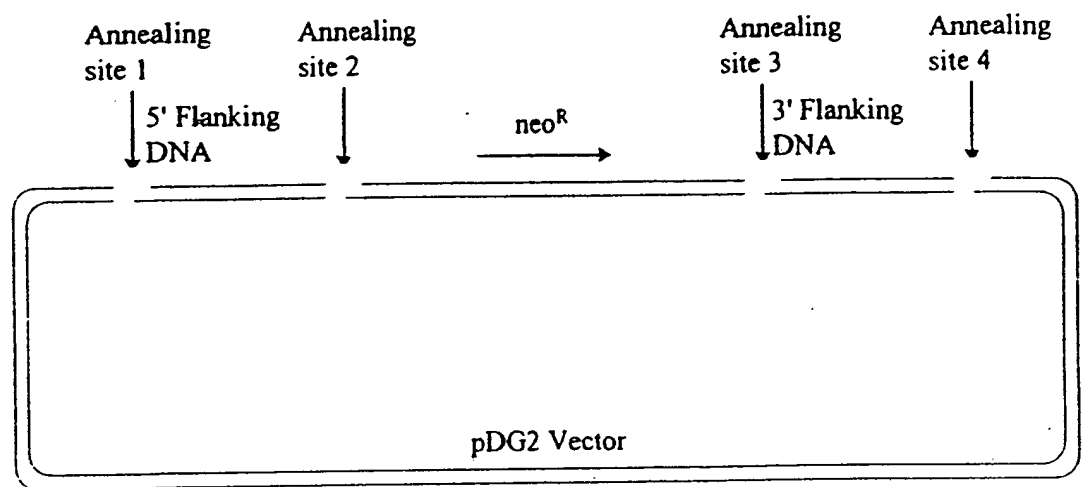
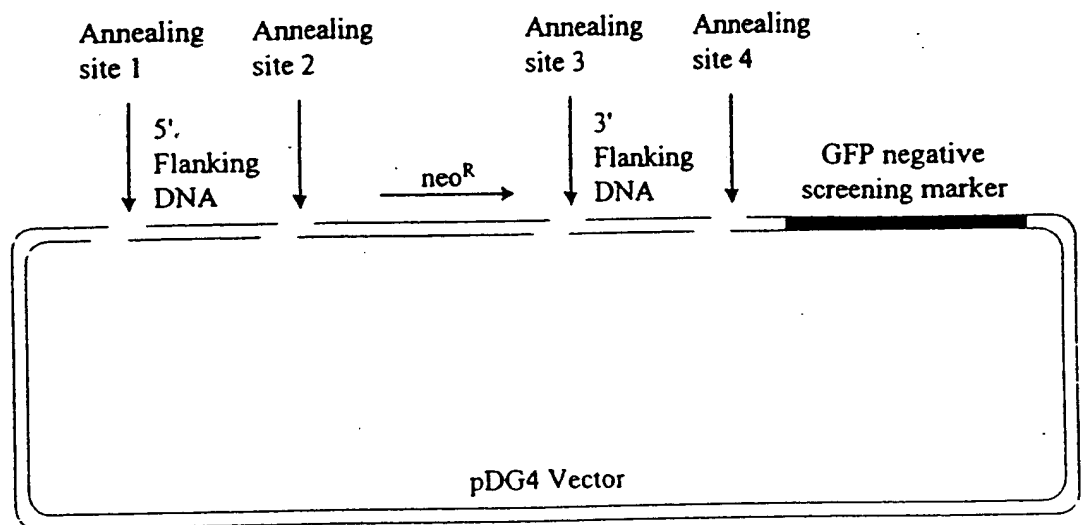


FIGURE 7



TCGGTTGGGCCCAGCAACTTCTAGCAAGCAGGCTACCCTTAGGACCATCCATATCCGATGAGCTCTACAG
TGGCTGCCTCCACTATGCCCTGTGTCTGTGGCGGCCTCCAAGAAGGAGTCTCCAGGTAGATGGGGCCTTGG
AGAGGATCCAACAGGTGTGGGCCCCCTCGCTCCAGTGCCGAGTGTGTGGGGACAGCAGCAGTGGGAAACAT
TATGGCATCTATGCCCTGCAATGGCTGCAGTGGCTTCTTCAAGAGGAGTGTGAGAAGGAGGCTCATCTACA
GGTGCCAAGTCGGGGCAGGGATGTGCCCAGTGGGATAAGGCCCATCGCAATCAGTGCCAGGCCTGCCGGCT
GAAGAAGTGC'TTACAAGCAGGCATGAACCAAGATGCTGTGCAGAAATGAGCGCCAACCTCGGAGCATGGCT
CAGGTCCACCTGGATGCCATGGAAACAGGCAGTGACCCCCGATCAGAACCAGTGGTAGCCTCTCCTGCTC
TGGCAGGGGCCAGTCCCCGGGGCCCCACGTCGTGTCTGCAACCAGAGCCATGGGGCCACCACTTTATGGC
CAGCCTTATCACCGCCGAAACTTGTGCTAAACTGGAGCCAGAGGACGCTGAAGAGAATATTGATGTCACC
AGCAATGACCCCCGAGTTCCCCGCATCCCCCTGCAGTCTGGATGGCATCCATGAGACATCTGCTCGCCTGC
TCTTCATGGCTGTCAAATGGGCCAAAACTTGCCCTGTGTTTCCAAACCTGCCTTTCCGGGACCAGGTGAT
CTTGCTGGAAGAGGCATGGAATGAGCTTTTCTTCTTGGAGCCATACAGTGGTCTCTGCCCCCTGGACAGC
TGCCCACTGCTGGCACCACCTGAGGCGTCCGGCAGCTCTCAGGGCAGGCTGGCCTTGGCCAGTGCAGAGA
CGCGCTTCTTGCAGGAAACCATCTCCCGGTTCCGAGCTCTGGCAGTGGATCCCACAGAGTTTGCCTGCCT
GAAGGCCCTGGTCTCTTCAAACCTGAAACACGAGGCTGAAGGATCCTGAGCACGTGGAGGCTTTGCAG
GACCAGTCCCAGGTGATGCTAAGCCAGCATAGCAAGGCTCACCAACCCAGCCAGCCTGTGAGGTTTGGGA
AATTGCTCCTCCTGCTCCCATCTTTGAGGTTCTTACGGCTGAGCGCATTGAGCTTCTCTTCTTCAGAAA
GACCATAGGGAACACTCCGATGGAGAAGCTCCTGTGTGACATGTTCAAAAACTAGTTGGGAGTGCCAAGT
GTCCACAGGCACCCAGGGGGGCGAGCACATCTTAGAAGCTAAATAGTTCCCTGCCTTTCTCAGCCAGTAAT
TCCACATTAGGTATTCTACCTAGCAGAAATTTCTCCCAAATATATTATTGGCATATTCAATGCCATC
CTAATCTTAATACCCCTAACTCTGCTTGGGCAGTAGAATGCATGGATGCGTTGTTATATTATAGGAGAA
ACAGCTTTGGCAA
(SEQ ID NO:19)

Targeting Vector (5' arm; 200 bp flanking neo insert):

AGACTGAAAGACAGACAGACAGACAGACAGGGGTTAAAGATGGATGCATCGGTTGGGCCCAGCAACT
TCTAGCAAGCAGGCTACCCTTAGGACCATCCATATCCGATGAGCTCTACAGTGGCTGCCTCCACTATG
CCTGTGTCTGTGGCGGCCTCCAAGAAGGAGTCTCCAGGTAGATGGGGCCTTGGAGAGGATCCAAC
(SEQ ID NO: 20)

Targeting Vector (3' arm; 200 bp flanking neo insert):

CTCCAGTGCCGAGTGTGGGGACAGCAGCAGTGGGAAACATTATGGCATCTATGCCTGCAATGGCTG
CAGTGGCTTCTTCAAGAGGAGTGTGAGAAGGAGGCTCATCTACAGGTGCCACAGCTCTGCCGGCCTG
CCCCGGTGTGCCTAGCACGGGTGGAGGGCGTTCAGGGAAAGCGGAAGACGAGACCAGGGCAAACA
(SEQ ID NO: 21)

FIG. 8